

CHAPTER 7

Railroad Bridge Safety Assurance

Introduction The integrity of railroad track and its supporting structures is vital to the safety of our Nation's railroads. Their tracks are carried by more than 100,000 bridges, with an average of one bridge in every 1.4 miles of track. Those bridges must be capable of supporting themselves and the trains that move over them without risking the lives of people on the trains or nearby.

The safety of railroad bridges is addressed, not by a regulation, but by a Statement of Agency Policy published as Appendix C of the Track Safety Standards. This FRA Bridge Safety Assurance Program implements that policy in fulfillment of FRA's obligation to protect the public from unnecessary risk that could arise from deficiencies in railroad bridges.

Objective The objective of the Program is to assure that railroad bridges retain their structural integrity, and do not suffer catastrophic failures - that is, fail so as to cause human casualties, train accidents or environmental damage.

Methods FRA addresses railroad bridge issues at several levels. First, FRA maintains current information on the bridge management practices of the Nation's railroads. Most of this information is obtained by FRA field personnel through regular contacts with the railroad personnel who manage, inspect, and maintain the bridges.

Secondly, FRA Track Inspectors have regular opportunities to observe railroad bridges during the course of their regular track inspections. A track irregularity on a bridge often indicates a developing structural problem with the bridge that should be addressed by the bridge owner. Other bridge conditions might be found that call for corrective action.

Thirdly, FRA Track Inspectors encounter bridges in the course of investigation of complaints and accidents. In these cases, inspectors are sometimes required to make a quick assessment of the seriousness of the conditions alleged in a complaint, or the possible involvement of a bridge condition in an accident cause.

These three topics are addressed in further detail in these instructions.

Responsibilities The primary responsibility for the FRA Bridge Safety Assurance Program rests with the Bridge Engineer in the Office of Safety Assurance and Compliance. The Track Specialist in each region will administer the program in that region. Field work will be conducted primarily by the Federal and State Track Safety Inspectors in each region who have received training in the fundamentals of railroad bridge inspection. Signal and Train Control personnel will assist with signal issues related to moveable bridges.

See “Procedures for Class I railroads and major regional and passenger railroads” for FRA regional responsibilities and assignments in regard to these railroads. Smaller railroads will be evaluated by the regions in which their assigned principal regional inspectors are located. Each regional track specialist should request the principal regional inspectors to nominate small railroads for bridge evaluations each year, and advise the Office of Safety Assurance and Compliance through the Regional Administrator of the nominees. Each region should nominate at least four small railroads each year for evaluation.

Factors in nominations should include any particular concern that has developed around a railroad's bridge management practices. The nominees should otherwise represent a cross-section of the small railroad population in the region, and should be commensurate with the anticipated workload of the principal regional inspectors and the track inspectors who will be conducting the bridge observations.

Essential Elements of Information The public, as employees, customers, passengers and neighbors of railroads, have a legitimate interest in the safety of railroad bridges. FRA represents that public interest, and has the duty to see that the railroad industry fulfills its safety obligations while at the same time assuring that public perceptions do not cause impractical or unwise policy or actions related to railroad bridges. By maintaining a public record of the manner in which railroad bridges are managed and maintained, FRA can serve both the public and the railroad industry in promoting effective, sensible bridge management practices.

The particular elements of information to be obtained and kept current for each railroad's bridge management program are:

- # Description of the railroad's structural inspection policy, including:
 - The prescribed frequency of inspection of various classes of structures.
 - The assignment and qualification of inspectors.
 - The manner in which an inventory of structures (bridge list) is compiled, with level of detail and policy on updates.
 - The types of reports prepared for various levels of inspection.
 - The utilization of Automatic Data Processing for inspection and inventory information.
 - The process of distribution, review and evaluation of inspection reports.

- The manner in which responsibility is assigned for decisions affecting the integrity of structures: inspection, evaluation, rating, repairs and modifications.

In most instances, that policy will be in writing, and the railroad will be able to furnish a copy. If not, it should be described in the inspector's own words.

The implementation of the policy, to address at least the following critical elements of information:

- The timeliness of inspections and reporting:
 - > Are inspections made and reported at the prescribed frequency?
 - > Does a system exist to assure that all bridges on the inventory are inspected?
 - > Are reports available at the prescribed level of review within a reasonable time after the inspection?
- The content of the inspection reports:
 - > Are the reports comprehensible?
 - > Is sufficient detail included to support adequate review and evaluation at higher levels?
 - > Are reporting procedures consistent over the entire railroad?
 - > Are reports from preceding years maintained, and do successive reports show normal progression of conditions?
- The process of evaluation of inspection reports:
 - > Are exceptions that are noted given the priority and attention merited by their description?
 - > Is a record maintained of the disposition or follow-up of exceptions?
- The procedures by which bridges are protected from overstress:
 - > The criteria and procedures by which bridges are selected for re-rating.
 - > The rating procedures and criteria: AREMA recommended practice or an alternate?
 - > Is rating conducted by staff engineers or consultants?
 - > How many bridges have been rerated recently (five years more or less)?
 - > How are load and operating restrictions placed?

Evaluation Procedures - General The procedures for bridge evaluation will vary according to the size of a railroad. Work on a class I railroad or major passenger carrier will be performed on a generally continuing basis, with activities conducted at times and locations as appropriate. FRA should maintain current information on the bridge management practices of each large railroad. Track specialists and inspectors should be familiar with the practices of each large railroad in their territories to permit efficient and prompt resolution of any questions or problems that might arise. This information should be updated when changes occur, or at least annually.

Bridge management evaluations on smaller railroads will be conducted on a periodic basis, consistent with availability of FRA resources, indications of possible problems, or opportunities to assist a railroad with bridge-related safety issues. Evaluation activity on a regional railroad should be consistent with the relative size of the railroad, ranging between the level of activity on a Class I and a larger short line.

Because this program is essentially continuous, exit interviews with the railroad and final reports of investigations will not be required. However, after an office evaluation, a memo report should be submitted through channels to the Track Division showing the findings, particularly to the issues listed above. The memo should be offered to the railroad for review before it is sent forward. If the inspector finds extraordinary conditions that would not be appropriately shared with the railroad officials at that time, they should be immediately reported in a separate document through the Regional Administrator to the Track Division.

Inspectors working on subsequent field investigations should also have copies of the current system report for that railroad, so they can evaluate the level to which the railroad's program is implemented in the field.

It is extremely important that any questionable aspects of a railroad's bridge program, or any structural deficiencies, be reported to the railroad immediately. FRA should not retain information about a questionable condition of which the railroad is unaware. Because this is not an enforcement program, FRA may share all information about a railroad's bridges and bridge program with the railroad, even to providing draft copies of memo reports to the railroad for review before submission. If there appear any potential problems that might not be resolved with cooperative efforts, the specialist should notify the Bridge Engineer immediately so that any information that might be necessary for legal action can be obtained and safeguarded.

Planning and Preparation for Program Evaluations Preparations for field investigations should be made during the headquarters work. Depending upon the size of the railroad and the location of the final repository of most inspection records, it might be necessary to visit several division headquarters to review the detailed records kept there, if they are not all forwarded to the system headquarters. This should be determined early in the investigation.

On railroads on which much field work will be conducted by other inspectors, a good informal periodic report will be necessary in order to pass guidance to the others. During the headquarters phase, the inspector will prepare a recommendation of the divisions that should be visited by himself and the other inspectors involved in the investigation. The railroad headquarters personnel should be asked for the contact people on each division.

While working at the system and division headquarters, all inspectors should be looking for bridges that should be selected as objects for the field portion of the investigation. This information can be obtained from the inspection reports, and by asking the railroad officials.

In requesting this information, the inspector should explain that the purpose of the investigation is not to determine if problem bridges exist; there is no question that they do, but they are not inherently unsafe. The purpose is to document just how the railroad handles the problem bridges to ensure safety, such as through increased inspections, derating, or temporary reinforcement.

Observation of Bridges The term "observation" is used here instead of "inspection" because FRA is not planning to actually inspect bridges during this investigation. Any bridge inspection carries with it an implied responsibility for the accuracy and adequacy of the findings of the inspection. That responsibility remains with the bridge owner, and the level of detail required to fulfill that responsibility is beyond the scope of this investigation. The FRA inspectors will observe the railroad inspectors and engineers while they perform full or partial inspections according to the requirements of the railroad.

In conducting bridge observations, the inspector must always keep in mind the difference between potential hazards and conditions that are merely cosmetic or indicate a need for maintenance. As far as an individual bridge is concerned, FRA is primarily concerned with the ability of today's bridge to carry today's loads without risk. A lack of paint, for instance, is not serious to FRA, even if it might lead to loss of section of critical members a few years hence. Whether the railroad chooses to deal with the problem now with paint or later with more costly repairs is an economic issue and not a safety problem. On a program level, however, Inspectors should report evidence that a railroad is permitting overall deterioration of its bridges to the point that critical conditions could shortly overwhelm its ability to inspect, protect and correct them.

Levels of Observation Bridge observation will be conducted at essentially three levels: routine, special, and incidental. Routine observation will consist of accompanying a railroad

bridge inspector or supervisor during routine, scheduled inspections over the railroad. Special observations will include observation of structures selected by the FRA inspector or the observation of special inspections conducted by the railroad, such as steel rating or damage assessments. Incidental observations will occur during the normal course of a track inspector's regular work, including track inspections and complaint and accident investigations.

Routine Bridge Observations On most railroads, bridges are inspected at regular intervals by either designated inspectors or by local supervisors of bridges or structures. The FRA Inspector should take opportunities to accompany those inspectors on occasional routine inspections to determine the types of information obtained by the railroad from the inspection, whether or not the inspections are being performed in accordance with the railroad's stated policy, and whether or not the inspections reflect the true condition of the structures.

The local inspectors typically cover the smaller bridges on a fairly long line of railroad in one day. They might return to spend more time, possibly with some assistance, on the larger or more demanding structures. Therefore, the number of bridges covered in one day is an indication of neither quality nor quantity of work accomplished, either for the railroad personnel or for the FRA Inspector. This fact should be considered by all concerned during the course of this investigation.

Special Bridge Observations Special inspections are typically made by railroads as required by circumstances.

- # When a bridge is damaged.
- # When the routine inspection reveals a potential critical exception or a requirement for rerating.
- # When a bridge is programmed for major repairs.

The FRA inspector should arrange with the railroad officials to observe special inspections if the opportunity exists. Of particular interest will be rating or steel inspections, which are typically performed by a specialist on the larger railroads, and which often go into great detail. Also of interest will be major bridge repair or upgrading projects, which might afford unusual opportunities to observe structural details that are otherwise obscured. Even painting or redecking will allow observation of bare steel, or top flanges of girders, or stringers that are normally covered by the deck ties.

Incidental Bridge Observations Track Inspectors have many opportunities to observe railroad bridges during the course of their work. During regular track inspections, they normally pass over at least one bridge in one or two miles of track. If the track on or near a bridge shows any indication of a problem, even if within compliance with the Track Safety Standards, it might be an indication of a problem

with the bridge or of a problem that could affect the bridge. These issues are addressed in the FRA training course on the Fundamentals of Bridges and are too detailed to be included here.

The inspector should not hesitate to check out tight gage, slewed ties, low approaches, alinement, cross level or profile conditions on a bridge, and to check for bridge conditions that either cause the condition or could be aggravated by it. Several instances have already occurred in which an FRA or State Inspector has prevented a serious bridge problem by first detecting a deviation in the track on a bridge.

Inspectors will occasionally investigate accidents or complaints involving bridges. In these cases, photographs are invaluable, especially if taken immediately following any accident involving a bridge. Whether or not the bridge failed, information concerning the bridge should be provided to the FRA Bridge Engineer and with the accident report. Railroads will generally assist in providing this information, including inspection reports, drawings and descriptions of the bridge.

Procedures for Class I railroads and major regional and passenger railroads The Regional Track Specialist should contact the principal bridge engineer of each major railroad at least once each year and arrange for a review of that railroad's current bridge management policy. The initial contact will usually be at the railroad's operating headquarters, followed by telephone, mail and personal contacts as necessary from year to year. The initial contacts for most large railroads were part of the bridge safety survey of 1992-1993. When a railroad undergoes a significant change in its configuration, as through mergers or a major acquisition, this information should be updated.

The purpose of the contacts with these railroads is to maintain current information as to whether the railroad is following the FRA guidelines for railroad bridge safety, whether the guidelines are adequate and proper to accomplish their objectives, and to assist the railroad with an unbiased outside observation of its bridge management practices. During the course of these contacts, the inspectors and specialists will have opportunities to observe work and inspections on various types of bridges, as well as reviewing documents in many different formats. These experiences will enhance each individual's knowledge of railroad bridge management practices.

Office work - large railroads The objective of the office portion of the investigation is to determine how the railroad assures, through a clear assignment of responsibility to competent persons, that the bridges it owns are safe to carry the loads that are operated over them. Inspectors should evaluate all of their findings in the light of this particular question. This objective is central to the program, and should be explained to the railroad personnel at every opportunity. It places all of the details of the program in the proper context.

Field Investigation - Large Railroads The objective of the field investigation is to support and verify or refute the information gathered in the office investigation. The field investigation should provide examples and physical evidence that the railroad's structure management program either does or does not provide the necessary assurances of safety. Findings of the field investigation should be prepared so as to relate as closely as possible to issues raised or addressed in the interim report of the office investigation.

The field investigation on the large railroads will often involve several inspectors, and on some, several regions. In these cases, a high level of planning and coordination among FRA personnel will be required for effective accomplishment of the work. Significant findings during the field investigation should be reported immediately to the Regional Specialist coordinating activities on that railroad so that they may be relayed to other inspectors on the same railroad, and to the FRA Bridge Engineer.

Conduct of the Investigation - Smaller Railroads The same principles apply to smaller railroads and are outlined above. The level of coordination among Inspectors and different regions will normally be less, according to the relative size of the railroad. The initial contact should normally be made jointly by the Principal Regional Inspector assigned to the railroad and either the Regional Specialist or the assigned Inspector. The instructions applying to larger railroads must be reduced in scale to apply to the smaller railroads.

The primary objectives of the investigation remain to determine whether or not the structural integrity of railroad bridges constitutes a safety problem that should be addressed by FRA, and to determine how the railroad assures, through a clear assignment of responsibility to competent persons, that the bridges it owns are safe to carry the loads that are operated over them, and to verify the policy through field observation.

If a small railroad has a consultant engaged to inspect and rate their bridges, the Inspector must be careful that the railroad incurs no consulting expenses to support FRA's requests for information. It must be recognized that a bridge management program on a smaller railroad could be much less formal than on a larger railroad, but still be effective.

The Inspector should expect that some smaller railroads might have bridge programs that are very rudimentary, if any at all. These situations will require a high degree of judgement by the Inspector in order to set priorities, and provide good advice to those railroads. The nature of the bridges involved and the density and weights of the traffic handled should be considered. The purpose of the FRA program is to prevent human casualties and societal damage due to bridge failures, and that objective should always be considered in dealing with these situations. They should be called to the attention of the Bridge Engineer as soon as possible, so that an appropriate level of evaluation can be performed to substantiate any necessary action by FRA to bring about resolution of these problem areas.

Reporting of Observations Reporting of structures observed must include the information called for on the attached reporting form, as applicable to each structure and type of inspection being performed. Additional remarks and photographs should be added to convey a true picture of the condition of the structure or at least to the extent that it can be determined from the level of observation made. Any concerns of the Inspector over the condition of the structure or any detail should be discussed with the railroad representative. The concern and the response should be recorded with the report for that structure.

A copy of the railroad inspector's report, if furnished, should be attached. A copy should be requested, but is not required.

Photographs Several photographs should be made when a bridge inspection is observed. Particular attention should be paid to captions that indicate the detail shown, its precise location on the structure, and the information that is conveyed in the photograph. Captions of photographs showing the entire structure or large portions should indicate the location of the photographer and the direction in which the camera is pointing.

The camera should be held either level or plumb about the axis of the lens. For photographs taken straight up or down, the top of the camera should be either perpendicular or parallel to the centerline of the structure.

Reporting Format: Bridge observations should be reported on the regular FRA safety inspection form using type code MSB. Each bridge included on that report should have its own line number and brief description. In addition, a standard format has been prepared for reporting bridge-specific information to the Track Division at FRA headquarters. This format is adaptable to several computer applications. A hard copy is attached to these instructions, reflecting its state of development at this time. Changes might be made in the future, so the inspector should look for the latest version to be sent via electronic means.

It is preferred that the format be completed in a computer, and then transmitted electronically to the Bridge Engineer at headquarters.

Potentially Hazardous Bridge Conditions If an FRA inspector detects a potentially hazardous condition on a bridge it is vital that a responsible railroad employee be notified immediately. If the inspector is accompanied by a railroad representative in any capacity, that person should be advised to of the necessity to protect railroad traffic or other affected persons or operations from the consequences of the hazard. If the inspector is unaccompanied, then every attempt should be made to contact the railroad by telephone. If unable to accomplish that notification, then the Inspector should contact the Regional Track Specialist or the Track Division at Headquarters and relay the message. Regardless of the time of day in which a bridge hazard is detected, the Inspector and the Regional Track Specialist should notify the Bridge Engineer or the Bridge Specialist in the Track Division of the circumstances. THE FIRST PRIORITY IS TO NOTIFY THE RAILROAD TO ENABLE THEM TO PROTECT TRAIN OPERATIONS.

Once the initial notifications are completed, the inspector should record the nature of the problem with photographs and a written record of the observations. A digital camera should be used, if available, so the photographs can be transmitted directly to the Track Division and to the railroad as necessary. The Inspector should document the response by the railroad and report to the Track Specialist or the Bridge Engineer as soon as it becomes known.

If the railroad response is inadequate, as determined by the Bridge Engineer or an authorized person in the Track Division, the Federal Railroad Administrator is authorized to issue an emergency order to either remove the bridge from service, or to place appropriate restrictions on train operations. Issuance of an emergency order requires a determination that continued operation presents a real danger to persons, property or the environment. FRA can also enter into a Compliance Agreement with the railroad, which generally carries the terms of an emergency order but stops short of removing a facility from service. A compliance agreement as issued for a bridge condition can be converted into an Emergency Order by FRA unilaterally if the railroad should substantially violate its terms.

In the instances in which FRA has issued emergency orders on bridges, the Bridge Engineer first determined through measurement and calculations that the bridge was in imminent danger of failure under load. The emergency orders were then issued by the Administrator, requiring that trains not operate over the subject bridges until they had been repaired, and then evaluated by a competent engineer and found safe for operation. The orders required the bridge owner to provide the engineer's calculations to FRA for review before the order was lifted. It was required that engineer be competent in the field of railroad bridge engineering, be appropriately licensed to practice engineering in the subject state, and that the calculations submitted to FRA bear the engineers embossed seal.

Every emergency order situation is different, and it is not possible to issue detailed instructions that will fit every case. Whenever a bridge condition arises, close coordination among regional staff and the FRA bridge personnel in headquarters is essential to bringing about prompt resolution.

The two emergency orders and the one compliance agreement issued by FRA to address bridge safety issues are included as examples. Note that relief was granted to the Oregon Pacific Railroad once the bridge had been repaired, but the Tonawanda Island Railroad never resumed operations.

Examples of Emergency Orders and Compliance Agreements Related to Bridges

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DEPARTMENT OF TRANSPORTATION
Federal Railroad Administration
[FRA Emergency Order No. 19, Notice No. 1]

Tonawanda Island Railroad; Emergency Order To Prevent Operation of Trains on Bridge 7708810

The Federal Railroad Administration (FRA) of the United States Department of Transportation (DOT) has determined that public safety compels issuance of this Emergency Order requiring the Tonawanda Island Railroad (TIRL) of North Tonawanda, New York, to discontinue operation of trains or any railroad on-track equipment on a railroad bridge numbered 7708810 which spans the Little River between North Tonawanda and Tonawanda Island, New York, until necessary repairs have been made to the bridge.

Authority

Authority to enforce Federal railroad safety laws has been delegated by the Secretary of Transportation to the Federal Railroad Administrator. 49 CFR Sec. 1.49. Railroads are subject to FRA's safety jurisdiction under the Federal railroad safety laws, 49 U.S.C. Secs. 20101, 20103. FRA is authorized to issue emergency orders where an unsafe condition or practice ``causes an emergency situation involving a hazard of death or personal injury." 49 U.S.C. Sec. 20104. These orders may impose such ``restrictions and prohibitions * * * that may be necessary to abate the situation." (Ibid.)

Background

The Tonawanda Island Railroad (TIRL), a common carrier, is a part of the general system of railroads. Its owner is Mr. Corigan Sanoian, P.E., of Niagara Falls, New York.

The TIRL operates over about a 1.5 miles of track, extending from a junction with the Conrail Niagara Branch in North Tonawanda, New York, to Tonawanda Island. The single main track route includes two highway rail grade crossings. One crossing, at River Road in North Tonawanda, is equipped with automated warning devices. The other highway rail grade crossing is located at Main Street in North Tonawanda and is equipped with traffic control signals on each side of the crossing.

In addition to the main track, several auxiliary tracks are in service, both at the junction and on Tonawanda Island. To access Tonawanda Island, the TIRL crosses the Little River via a wood and metal bridge identified by a number affixed to its westernmost bent, 7708810. For the purposes of this Emergency Order, the bridge is hereinafter designated as "Bridge 7708810." The bridge consists of two timber trestle approaches, one on each side of a steel through truss swing span. The swing span has been inoperative for many years.

The Little River is a navigable waterway formed by a channel of the Niagara River, Ellicott Creek and Tonawanda Creek. It flows into the Niagara River approximately 10 miles above Niagara Falls. The Little River is the site of a significant concentration of pleasure boating during the summer. A marina is located adjacent to and downstream from the bridge. A highway bridge is located about 300 feet downstream.

The sole piece of rolling stock regularly used by the TIRL is a 50-ton industrial switcher type locomotive. The railroad's current customer base includes a consignee on Tonawanda Island which receives wood fibre in box cars. There are no consignors. Until approximately one year ago, the TIRL delivered building materials to another consignee on Tonawanda Island. However, that consignee discontinued service from the TIRL after Mr. Sanoian expressed an intent to shut down the railroad. Total traffic for TIRL in 1995 was about 51 cars.

FRA's history of inspecting the TIRL under Mr. Sanoian's ownership dates back to 1990. The following chronology highlights FRA activity with respect to the TIRL:

October 11, 1990: FRA Chief Inspector John Conklin conducted an operating practices inspection and issued inspection report No. 72, informing Mr. Sanoian that the TIRL was not in compliance with 49 CFR Part 225 (Accident/Incident Reporting), as well as 49 CFR Part 228 (Hours of Service Recordkeeping).

December 17, 1990: FRA Railroad Safety Inspector Daniel Feneziani inspected the TIRL locomotive and issued inspection report No. 171, informing Mr. Sanoian of 17 items not in compliance with the Federal railroad safety standards.

February 28, 1991: Chief Inspector Conklin conducted an operating practices inspection and issued inspection report No. 30, informing Mr. Sanoian that the TIRL still was not in compliance with 49 CFR Part 225.

December 10, 1992: Chief Inspector Conklin conducted an inspection of operating practices and issued inspection report No. 50, informing Mr. Sanoian that the TIRL was not in compliance with 49 CFR Parts 225, 228 and 240 (Qualification and Certification of Locomotive Engineers).

October 21, 1993: FRA Chief Inspectors Patrick Sullivan and William Robbins inspected the TIRL locomotive and issued inspection report No. 05, informing Mr. Sanoian of 22 items not in compliance with Federal railroad safety standards.

December 7, 1994: Chief Inspector Sullivan conducted an inspection of operating practices and issued inspection report No. 27, informing Mr. Sanoian that the TIRL was not in compliance with 49 CFR Parts 217 (Railroad Operating Rules), 225, 228, and 240.

August 9, 1995: FRA Principal Railroad Safety Inspector Bernard T. Lutz inspected the TIRL locomotive and issued inspection report No. 67, notifying Mr. Sanoian of 15 items of non-compliance with Federal railroad safety standards.

October 13, 1995: FRA Regional Administrator Mark McKeon mailed Mr. Sanoian a certified letter in which he enumerated the locomotive's conditions of non-compliance with the Federal railroad safety standards. The letter noted that some of the conditions have existed since December 17, 1990. The letter also acknowledged FRA's awareness that the TIRL is a small business with limited resources. Regional Administrator McKeon offered to discuss the defects with Mr. Sanoian in an effort to work with him to bring the railroad into compliance. United States Post Office records indicate that a notice of the certified letter was served on Mr. Sanoian on October 17, October 22, and November 2, before it was returned to the sender as "unclaimed."

January 2 and January 4, 1996: FRA Railroad Safety Inspector Ronald Anderson inspected bridge 7708810. His inspection was in response to concerns raised by a New York State Department of Transportation Railroad Safety Inspector. Inspector Anderson concluded that the bridge is unsafe. While inspecting the bridge on January 2, 1996, Inspector Anderson fell through the bridge due to the deteriorated condition of the bridge timbers.

January 12, 1996: Inspector Anderson and New York State Department of Transportation Inspector Keith McClain met with Mr. Sanoian to discuss the condition of the bridge. Mr. Sanoian disagreed with Inspector Anderson's assessment of the bridge and stated his belief that the bridge was safe for a load of 500,000 pounds.

January 15, 1996: Regional Administrator McKeon and Railroad Safety Inspector Michael Ziolkowski met with Mr. Sanoian to discuss both the locomotive and the bridge. Although he did not agree that the bridge was unsafe, Mr. Sanoian stated that he would not operate over it until it had been repaired and had been inspected by an FRA representative. He further stated that the locomotive would not be used until it was repaired.

Regional Administrator McKeon hand-delivered to Mr. Sanoian a copy of the letter of October 13, 1995, which previously had been returned to FRA unclaimed.

January 16, 1996: Regional Administrator McKeon prepared and signed a letter confirming the discussions of January 15. The letter, dated January 16, 1995, stated in part:

The TIRL bridge is unsafe for the movement of trains, locomotives and other rolling stock. The bridge must not be operated over until it is repaired.

The letter noted Mr. Sanoian's verbal assurances that he had obtained the services of a contractor to repair the bridge and that he would provide FRA with an opportunity to inspect the bridge once the repairs were made. He also agreed to repair the locomotive before using it again.

The letter further stated that unless the TIRL took immediate steps to repair the bridge, Regional Administrator McKeon would recommend issuance of an Emergency Order prohibiting its use.

January 17, 1996: Inspector Ziolkowski hand-delivered the January 16 letter to Mr. Sanoian. Mr. Sanoian stated to Inspector Ziolkowski that the bridge did not have "a structural problem" but that it had a "lateral problem."

January 18, 1996: During a telephone conference with Regional Administrator McKeon and Deputy Regional Administrator Lawrence Hasvold, Mr. Sanoian requested permission to use the locomotive to move material to repair the bridge. Regional Administrator McKeon advised Mr. Sanoian that the locomotive could not be used until it was in compliance with the applicable Federal regulations.

January 19-22, 1996: The TIRL received loaded boxcar RBOX 40945 in interchange from Conrail, moved it across the bridge, and placed it at the consignee's facility on Tonawanda Island. This move presumably was made with the railroad's only locomotive.

January 25, 1996: Principal Inspector Lutz again inspected the TIRL locomotive and issued inspection report No. 1, informing Mr. Sanoian of 14 items not in compliance with Federal railroad safety standards. As a result of the inspection, Inspector Lutz removed the TIRL locomotive from service by issuing a Special Notice for Repairs, Form FRA 6180 ("Form 8"). A copy of the form was placed in the locomotive cab.

January 26, 1996: Inspector Ziolkowski hand-delivered a copy of the Form 8 to Mr. Sanoian. Despite the fact that the boxcar was placed on the trailing end of a stub track with the locomotive ahead of it, Mr. Sanoian stated that he had not moved the locomotive and could not have done so because it "had no air."

January 29, 1996: FRA Inspector Ron Marx conducted a track inspection on the TIRL and identified five deficiencies, including a five-and-one-sixteenth-inch cross level deviation on Bridge 7708810. This serious track defect does not meet even the minimum track geometry standards contained in 49 CFR Part 213. In addition, the added load placed on one rail by a downward tilt of the track to the downstream side further overloads the already severely degraded bridge structural members supporting the bridge timbers to which that rail is attached. Inspector Marx also found combustible debris located against the southeast corner of the bridge.

January 29-31, 1996: Representatives of Parsons Brinckerhoff, Quade and Douglas, Inc. inspected Bridge 7708810. Parsons Brinckerhoff, an engineering consulting firm with nationally recognized expertise in bridges, including wooden structures, is under contract to DOT to inspect Bridge 7708810 and to advise FRA of the bridge's structural condition. Parsons Brinckerhoff evaluated the bridge in accordance with accepted principles of structural engineering as contained in the "Manual for Railway Engineering" published by the American Railway Engineering Association. Parsons Brinckerhoff determined, and reported to FRA, that the bridge is unsafe, even for the movement of TIRL's 50-ton locomotive.

Condition of the bridge

The investigation performed by Parsons Brinckerhoff on behalf of FRA disclosed that bridge 7708810 is in need of repair and should be closed to all rail traffic until adequate repairs have been made. A report of the investigation notes that severe deterioration and distress exist in the three northern stringers of the westernmost span of the bridge structure. The damage includes severe section loss caused by fungal attack, crushing of the bearing surfaces due to an inadequate bearing area, and horizontal shear cracks along most of the length of the stringers. The three stringers are so badly deteriorated that they are considered as failed. Because of the complete lack of support under one rail, the entire span is rated zero for live load capacity.

Failure of the bridge under load could have very serious consequences. In addition to killing or injuring railroad crew members, failure of the bridge also could kill or injure pleasure boaters on the river or at the marina. A catastrophic failure of the bridge causing any pollution of the Niagara River, whether from locomotive diesel fuel or from the contents of a boxcar, could have international impact. Furthermore, failure of the railroad bridge over the fast-moving current could damage the nearby highway bridge.

Finding and Order

The results of bridge engineers' inspection of Bridge 7708810 have led FRA to conclude that any future use of the bridge poses an imminent and unacceptable threat to public safety. A past pattern of failure by the TIRL to comply with Federal railroad safety laws and regulations persuades FRA that reliance upon the cooperation of the TIRL to repair the bridge to safe condition is inadequate to protect public safety. I find that the unsafe conditions discussed above create an emergency situation involving a hazard of death or injury to persons. Accordingly, pursuant to the authority of 49 U.S.C. Sec. 20104, delegated to me by the Secretary of Transportation (49 CFR Sec. 1.49) it is ordered that the Tonawanda Island Railroad shall discontinue, and shall not permit, the operation of trains or any railroad on-track equipment over Bridge 7708810 while this Emergency Order remains in effect.

Relief

The Tonawanda Island Railroad may obtain relief from this Emergency Order by providing the Federal Railroad Administrator with a report of inspection and evaluation of repairs, indicating to FRA's satisfaction that the Bridge 7708810 has been acceptably repaired. The report should be prepared by an engineer who is technically proficient and legally competent in the field of railroad bridge engineering, and it should state that the capacity of the bridge to carry safely railroad cars and locomotives has been restored. The configuration and weights of the loads for which the determination has been made should be stated in the report. Upon FRA's approval of the bridge engineer's assessment of the bridge restoration, and following an inspection by FRA if the agency deems it necessary, the Administrator will rescind this Emergency Order.

Penalties

Any violation of this order shall subject the person committing the violation to a civil penalty of up to \$20,000. 49 U.S.C. Sec. 21301. FRA may, through the Attorney General, also seek injunctive relief to enforce this order. 49 U.S.C. Sec. 20112.

Effective Date and Notice to Affected Persons

This Emergency Order shall take effect at 12:01 a.m. (EST) on February 13, 1996, and apply to all operations of trains or railroad on-track equipment on Bridge 7708810 on or after that time. Notice of this Emergency Order will be provided by publishing it in the Federal Register. Copies of this Emergency Order will be sent by mail or facsimile prior to publication to Mr. Corigan Sanoian of the Tonawanda Island Railroad, the Consolidated Rail Corporation, International Filler Corporation, the City of North Tonawanda, New York Department of Transportation, and the Association of American Railroads.

Review

Opportunity for formal review of this Emergency Order will be provided in accordance with 49 U.S.C. Sec. 20104(b) and section 554 of Title 5 of the United States Code. Administrative procedures governing such review are found at 49 CFR part 211. See 49 CFR Secs. 211.47, 211.71, 211.73, 211.75, and 211.77.

Issued in Washington, D.C. on February 12, 1996.

Jolene M. Molitoris,

Administrator.

[FR Doc. 96-3592 Filed 2-15-96; 8:45 am]

BILLING CODE 4910-06-P

[Federal Register: December 22, 1999 (Volume 64, Number 245)]

[Notices]

[Page 71844-71846]

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DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

[FRA Emergency Order No. 22, Notice No. 1]

Oregon Pacific Railroad; Emergency Order To Prevent Operation of Trains on the Railroad Bridge Crossing Johnson Creek in the City of Milwaukie, Oregon

The Federal Railroad Administration (FRA) of the United States Department of Transportation (DOT) has determined that public safety compels issuance of this Emergency Order requiring the Oregon Pacific Railroad Company (OPR) to discontinue operation of trains or any railroad on-track equipment on a railroad bridge it owns spanning Johnson Creek (hereinafter designated as the "Johnson Creek Bridge") in the City of Milwaukie, Oregon. The bridge shall remain out of service until it has been properly repaired and its capacity determined by a registered professional engineer licensed to practice in the State of Oregon and who is technically proficient in the field of timber railroad bridge engineering.

Authority

Authority to enforce Federal railroad safety laws has been delegated by the Secretary of Transportation to the Federal Railroad Administrator. 49 CFR 1.49. Railroads are subject to FRA's safety jurisdiction under the Federal railroad safety laws, 49 U.S.C. 20101, 20103. FRA is authorized to issue emergency orders where an unsafe condition or practice "causes an emergency situation involving a hazard of death or personal injury." 49 U.S.C. Sec. 20104. These orders may impose such "restrictions and prohibitions * * * that may be necessary to abate the situation." (Ibid.)

Background

The Oregon Pacific Railroad Company, a common carrier, is a part of the general railroad system of transportation and operates two principal segments of track. The segment in which the Johnson Creek Bridge is located consists of 4.28 miles of main track and 2.11 miles of secondary or yard trackage, or a total trackage of 6.39 miles, extending from milepost 0.26 (at its connection with Union Pacific Railroad Company's Portland-Eugene mainline at UP MP 769) at or near East Portland, Oregon, to milepost 4.54 at Milwaukie, all of which is located in Clackamas County, Oregon. The Oregon Pacific Railroad acquired this segment from East Portland Traction Company on January 1, 1997, and commenced railroad operation on that date.

The other segment of railroad operated by the Oregon Pacific Railroad is not contiguous with the first. It extends 9.93 miles from Canby to Molalla, Oregon, and includes a total of 11.38 miles of trackage. The Oregon Pacific Railroad likewise commenced railroad operations on that segment on January 1, 1997.

The President, Chief Executive Officer and General Manager of the Oregon Pacific Railroad is Mr. Richard A. Samuels, whose office mailing address is Oregon Pacific Railroad Company, P.O. Box 22548, Portland, Oregon 97269. Mr. Samuels is also the principal stockholder of the company.

The Oregon Pacific Railroad crosses Johnson Creek in Milwaukie, Oregon, on a timber trestle bridge not identified by number and located approximately one-half mile upstream from the point where Johnson Creek empties into the Willamette River. The location is also approximately 300 feet west of S.E. McLoughlin Boulevard (Oregon State Highway 99E) between its intersections with S.E. Harrison Street and S.E. Jackson Street. Geographic coordinates are 45 deg.26'41" North latitude and 122 deg.38'38" West longitude. There is no commercial water traffic on Johnson Creek.

The Oregon Pacific Railroad crosses the bridge to serve one shipper, AmeriCold Logistics, located south of the bridge. AmeriCold Logistics transports frozen food products in mechanical refrigerator cars at a rate of about two cars per week, typically hauled in one train. Each refrigerator car has a gross weight of 220,000 pounds. The Oregon Pacific Railroad uses a small locomotive whose weight is undetermined.

Condition of the Bridge

The bridge is 127 feet long and consists of a nine-span open-deck timber trestle carrying a single track in a twelve-degree curve to the west. For reference in this emergency order and other documents relating to this emergency order, the bridge components are numbered from north to south and from east to west, with the north dump bent or abutment numbered as 0.

Intermediate bents one through seven nominally consist of four driven timber piles. Bent 8 is framed on a mud sill. Caps measure 14 inches by 14 inches by 12 feet on bents 1 through 5, and bent 8. Caps in bents 6 and 7 are 14 inches by 13 inches by 12 feet, with the large side horizontal. Each span has eight stringers, with four stringers essentially centered under each rail, 8 inches by 18 inches by 32 feet, with stringer joints alternating between bents. The clear space under the bridge is approximately six feet above the water level of the stream.

Track ties of 7 inches by 9 inches by 9 feet rest directly on top of the stringers, and support in turn tie plates and the two running rails, 75 pounds per yard, one 75-pound-per-yard guard rail connected to the west running rail, and two 55-pound-per-yard inner guard rails. The track is of conventional bolted rail construction.

Bent 5 is missing piles 1 and 2, and is supported by only piles 3 and 4, both under its west side. An outrigger beam has been placed under span 5, under the stringers and directly against the north face of the cap of bent 5. This beam consists of several timbers, 8 inches by 16 inches in cross section, placed vertically. These timbers are packed in four plies. Plies 1 and 3 each consist of two 16-foot timbers butt joined at the center of the beam. Plies 2 and 4 each consist of one 30-foot timber and one 2-foot timber, butt joined two feet from the west end of the beam, nearest the bridge. The beam is oriented with its individual plies placed on their short edges.

The outrigger beam is supported on its east end by a track tie resting on the ground on the south bank of Johnson Creek where the creek makes a sharp bend to the north on the east side of the bridge. The outrigger beam is supported on its west end by a 3/8-inch diameter chain wrapped once around two track ties. Wooden blocks and wedges are placed between the bottoms of the stringers and the top of the outrigger beam. The east, or "free" end of the cap of bent 5 has settled approximately five inches from the bottoms of stringers 1 through 4.

Stringer 1 over spans 5 and 6 has essentially failed, with a deep shear crack near its neutral axis for its full length. The cap of bent 6 is demonstrating severe crushing over piles 3 and 4. The bridge shows signs of heavy vertical deflection under load on the east side.

On December 1, 1999, a track safety inspector and a bridge inspector from the Oregon Department of Transportation (ODOT), and a track safety specialist from FRA inspected the bridge. On December 2, 1999, they advised Mr. Samuels of the unsafe condition of the bridge. Mr. Samuels verbally agreed to immediately remove the bridge from service until it could be properly repaired. This discussion and agreement were memorialized in a letter dated December 6, 1999, to Mr. Samuels from FRA's regional administrator for Region 8, Dick L. Clairmont. Subsequent investigation by FRA has revealed, however, that the Oregon Pacific Railroad did not take the bridge out of service, but instead placed more blocking and wedges between the stringers and the top of the outrigger beam and continued to operate railroad rolling stock over the bridge.

The ODOT inspectors, along with an FRA inspector who has received specialized training in timber bridge inspection, then performed a more detailed measurement of the components of the bridge which are summarized in the paragraphs above. Using those measurements, FRA has determined that the Johnson Creek Bridge is in danger of imminent, catastrophic failure at any time that a railroad load passes over the bridge. The configuration of the outrigger beam arrangement overly stresses the stringers, caps, and piles of piers 4, 5 and 6 far beyond their normal capacity, and even the outrigger beam itself could fail at any time. Depending on the amount and direction of deflection of the bridge components, the 3/8-inch diameter chain which secures the west end of the outrigger beam also may become stressed far beyond its ultimate capacity. Merely replacing or reinforcing the chain would not correct the unstable condition created by the lack of piles 1 and 2 in bent 5.

Failure of the bridge under load could have very serious consequences. The bridge failure could cause the train to fall into Johnson Creek, killing or injuring any railroad crew members operating rolling stock, killing or injuring any innocent bystanders using Johnson Creek or its banks, and possibly blocking the creek resulting in widespread flooding in the immediate area. Locomotive diesel fuel and/or fuel and contents of a mechanical refrigerator car could cause severe environmental damage to Johnson Creek and the nearby Willamette River.

Finding and Order

FRA has concluded that any future railroad use of the Johnson Creek Bridge on the Oregon Pacific Railroad poses an imminent and unacceptable threat to public and employee safety. The past failure of the Oregon Pacific Railroad to voluntarily remove the bridge from service and perform proper repairs persuades FRA that the agency cannot rely upon the cooperation of the railroad to protect public safety in relation to the Johnson Creek Bridge. I find that these unsafe conditions create an emergency situation involving a hazard of death or injury to persons.

Accordingly, pursuant to the authority of 49 U.S.C. 20104 delegated to me by the Secretary of Transportation (49 CFR 1.49), it is ordered that the Oregon Pacific Railroad Company shall discontinue, and shall not permit, the operation of trains or any railroad on-track equipment over the Johnson Creek Bridge while this Emergency Order remains in effect.

Relief

The Oregon Pacific Railroad Company may obtain relief from this Emergency Order by providing the Federal Railroad Administrator with a report of inspection and evaluation of repairs, indicating to FRA's satisfaction that the Johnson Creek Bridge has been acceptably repaired. The report shall be prepared and sealed by a registered professional engineer who is licensed to practice in the State of Oregon and is technically proficient in the field of timber railroad bridge engineering. The report shall state that the capacity of the bridge to carry safely railroad cars and locomotives has been restored. The configuration and weights of the loads for which the determination has been made shall be stated in the report, together with all calculations upon which that determination is based. The original of the engineer's report, bearing the embossed imprint of the seal of the engineer, shall be provided to the regional administrator of FRA's Region 8 before the report will be considered by FRA. Upon FRA's approval of the engineer's assessment of the bridge restoration, and following an inspection by FRA in which the agency finds the bridge properly repaired to safe condition, the Administrator will rescind this Emergency Order.

Penalties

Any violation of this order shall subject the person committing the violation to a civil penalty of up to \$22,000. 49 U.S.C. 21301. FRA may, through the Attorney General, also seek injunctive relief to enforce this order. 49 U.S.C. Sec. 20112.

Effective Date and Notice to Affected Persons

This Emergency Order shall take effect at 12:01 a.m. (PST) on December 17, 1999 and apply to all operations of trains or railroad on track equipment on the Johnson Creek Bridge on or after that time. Notice of this Emergency Order will be provided by publishing it in the Federal Register. Copies of this Emergency Order will be sent by mail or facsimile prior to publication to Mr. Richard A. Samuels, President, Chief Executive Officer and General Manager, Oregon Pacific Railroad Company, P.O. Box 22548, Portland, Oregon 97269; the Union Pacific Railroad Company; the City of Milwaukie, Oregon; AmeriCold Logistics; Oregon Department of Transportation; the Association of American Railroads; and the American Short Line and Regional Railroad Association.

Review

Opportunity for formal review of this Emergency Order will be provided in accordance with 49 U.S.C. 20104(b) and section 554 of Title 5 of the United States Code. Administrative procedures governing such review are found at 49 CFR part 211. See 49 CFR 211.47, 211.71, 211.73, 211.75, and 211.77.

Issued in Washington, DC on December 16, 1999.

Jolene M. Molitoris,
Administrator.

[FR Doc. 99-33209 Filed 12-21-99; 8:45 am]

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[Federal Register: February 2, 2000 (Volume 65, Number 22)]

[Notices]

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DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

[FRA Emergency Order No. 22, Notice No. 2]

Oregon Pacific Railroad; Notice of Relief From Emergency Order No. 22

AGENCY: Federal Railroad Administration, Department of Transportation.

ACTION: Notice of Relief.

SUMMARY:

This notice provides relief for the Oregon Pacific Railroad from the limitations of Federal Railroad Administration (FRA) Emergency Order No. 22, issued December 16, 1999. The relief allows the Oregon Pacific Railroad to recommence operation of trains and other railroad on-track equipment on a railroad bridge it owns spanning Johnson Creek (hereinafter designated as the "Johnson Creek Bridge") in the City of Milwaukie, Oregon.

Authority

FRA is authorized to issue emergency orders where an unsafe condition or practice "causes an emergency situation involving a hazard of death or personal injury." 49 U.S.C. Sec. 20104. These orders may impose such "restrictions and prohibitions * * * that may be necessary to abate the situation." (Ibid.) Likewise, FRA is authorized to grant relief from an emergency order when the agency deems that the unsafe condition or practice which gave rise to the emergency order no longer exists.

Background

The Oregon Pacific Railroad Company, a common carrier, is a part of the general railroad system of transportation and operates two principal segments of track. One of the segments crosses Johnson Creek in Milwaukie, Oregon, on a timber trestle bridge not identified by number and located approximately one-half mile upstream from the point where Johnson Creek empties into the Willamette River. In December, 1999, based on detailed inspections of the bridge, FRA determined that the Johnson Creek Bridge was in danger of imminent, catastrophic failure at any time that a railroad load passes over the bridge.

Failure of the bridge under load could have had very serious consequences. The bridge failure could have caused a train to fall into Johnson Creek, killing or injuring any railroad crew members operating rolling stock, killing or injuring any innocent bystanders using Johnson Creek or its banks, and possibly blocking the creek resulting in widespread flooding in the

immediate area. Locomotive diesel fuel and/or fuel and contents of a mechanical refrigerator car could have caused severe environmental damage to Johnson Creek and the nearby Willamette River.

FRA therefore concluded that any railroad use of the Johnson Creek Bridge on the Oregon Pacific Railroad posed an imminent and unacceptable threat to public and employee safety involving a hazard of death or injury to persons. On December 16, 1999, the Federal Railroad Administrator issued Emergency Order No. 22 which prohibited all operations of trains and other railroad on-track equipment on the Johnson Creek Bridge until repairs were made and certified as sufficient by a licensed bridge engineer and approved by FRA.

Following the issuance of Emergency Order No. 22, the Oregon Pacific Railroad made repairs to the Johnson Creek Bridge under the guidance of a professional engineer licensed to practice in the State of Oregon. On January 17, 2000, FRA's professional bridge engineer inspected the Johnson Creek Bridge and found that the repairs made to the bridge since the issuance of Emergency Order No. 22 are sufficient to restore immediate safety to the bridge structure.

The termination of Emergency Order No. 22 does not indicate that FRA has made any determination regarding the capacity of the bridge in addition to the work performed by the professional engineer guiding the repairs on behalf of the Oregon Pacific Railroad. Relief from Emergency Order No. 22 simply means that FRA finds that the bridge no longer presents an imminent hazard of death or injury to persons. The Oregon Pacific Railroad continues to be fully responsible for the structural integrity and safe operation of the Johnson Creek Bridge. FRA strongly recommends that the Oregon Pacific Railroad follow a regular program of inspection and maintenance of all railroad bridges owned and operated by the railroad.

Relief

In light of the foregoing, I grant the Oregon Pacific Railroad relief from Emergency Order No. 22. The railroad may immediately recommence operation of trains and other railroad on-track equipment on the Johnson Creek Bridge in the City of Milwaukie, Oregon. The issuance of this Notice does not preclude imposition of another emergency order governing the condition of the bridge should that condition again deteriorate to the extent that I believe it poses an imminent and unacceptable threat to public safety.

Issued in Washington on January 20, 2000.

Jolene M. Molitoris,

Administrator.

[FR Doc. 00-2229 Filed 2-1-00; 8:45 am]

BILLING CODE 4910-06-P

Safety Compliance Agreement Between Columbus and Greenville Railway Company and the Federal Railroad Administration Concerning Bridge Conditions

Article I. Background

- A. Columbus and Greenville Railway Company (CAGY) is an interstate carrier by rail which operates a freight railroad extending approximately 168 miles between Columbus and Greenville, Mississippi. It provides the only rail service for movement of freight in the central Mississippi Delta and the continued availability of a safely operated service is vital to the economy of CAGY's service area. CAGY operates no passenger trains on that segment of its railroad. CAGY is subject to the jurisdiction of the Federal Railroad Administration (FRA) under the federal railroad safety statutes, 49 U.S.C. Chapters 201-213.
- B. FRA Track Safety Inspectors regularly monitor the compliance of CAGY with the Federal Track Safety Standards (found at 49 C.F.R. Part 213). These inspections have disclosed several deviations from the Track Safety Standards in tracks located on bridges and bridge approaches. Detailed investigations into the causes of these deviations have led FRA to evaluate bridge conditions overall on CAGY. In 1999, FRA found that, due to their configuration, bridges on CAGY line segments described in Article II, below, as Category A segments, could not continue to sustain the loads operated by CAGY over a reasonable period of time. FRA also determined that CAGY bridge maintenance work at the time was barely able to keep the bridges in service from day to day. FRA reported these findings to CAGY, and CAGY replied with a commitment to correct some of the shortcomings found by FRA. However, CAGY's response has not been sufficient to allay FRA's concerns.
- C. FRA has extensive authority with which to enforce Federal railroad safety laws and regulations. FRA may impose civil penalties on railroads, officers, and employees, disqualify individuals from safety-sensitive functions, issue emergency orders and compliance orders, seek injunctive relief to compel compliance, and seek criminal penalties for the knowing and willful falsification, destruction, or failure to complete records or reports that are required to be completed. The authority vested in FRA by the federal railroad safety statutes extends to all areas of railroad operations, including the safety of railroad bridges, whether or not FRA has issued regulations in the particular area of concern. Nothing in this agreement precludes FRA from exercising any of these authorities with regard to CAGY as FRA deems necessary.
- D. Under its statutory emergency order authority (49 U.S.C. 20104), FRA is authorized to act in cases involving the safety of bridges that carry railroad tracks, where the condition of the bridges presents an emergency situation involving a hazard of death or personal injury. FRA may use its emergency order authority to address bridge safety problems even though FRA does not have rules on bridge maintenance. FRA does have guidelines covering bridges published at 49 C.F.R. Part 213, Appendix C.
- E. Because of the effective application of sound engineering practices by the railroads to the design and management of their bridges, accidents caused by the structural failure of railroad bridges are exceedingly rare. Train accidents from this cause have occurred at a rate of fewer than one or two per year over the past several decades across the entire nation. However, the 168-mile CAGY accounts for five of the train accidents caused by the structural failure of bridges in the ten years beginning with 1991. Considering this relatively high level of bridge-related train accidents, and the overall condition of CAGY bridges noted by FRA during the past several years, FRA has

determined that CAGY must take remedial action to protect the safety of trains operating over its bridges.

- F. A CAGY accident on February 5, 2001 at Indianola, Mississippi, illustrates the seriousness of the bridge deficiencies and the urgent need for corrective action. In that accident, a bridge failed under a train traveling east at 10 miles per hour and slowing to stop in downtown Indianola. As a result, three rail cars, including a car of agricultural herbicide, derailed and landed in the water below. Fortunately, no herbicide was discharged. A fourth car derailed but remained on the bridge. FRA observation of bridge conditions on the CAGY after the accident revealed another bridge in imminent danger of collapse. CAGY removed the bridge from service. FRA's knowledge of bridge conditions on the CAGY, the railroad's bridge maintenance practices, and the heavy weights of some rail cars being hauled across the railroad's bridges has led FRA to conclude that imminent hazards of death or injury may exist at many bridges on the CAGY. Accordingly, FRA is conducting further observations of CAGY bridges and is considering issuing an emergency order to address the condition of those bridges and CAGY's bridge maintenance practices.
- G. FRA and CAGY have entered into this Compliance Agreement in order to improve CAGY's activities for protection of safe train operation over its bridges and to ensure that, in the absence of CAGY's strict adherence to this agreement, FRA will be able to take prompt and uncontested action to ensure compliance with its terms. FRA and CAGY agree as follows:

Article II. Scope of the Compliance Agreement

- A. **Portions of railroad subject to the Agreement:** For purposes of this Agreement CAGY is divided into three categories.
1. *Category A* segments are those portions of the original Columbus and Greenville Railway acquired by CAGY in 1975 between Columbus and Greenville, Mississippi, on which trains are operated.
 2. *Category B* segments acquired by CAGY from other railroads 1975, on which trains are operated.
 3. *Category C* includes all segments on which trains are not operated.
- B. **Classification of segments:** CAGY may reclassify a line segment into Category C at any time by removing the track from service and notifying FRA of the reclassification. CAGY may reclassify a line segment from Category C to another category only when that segment meets all the requirements in this agreement for that new category, and must notify FRA of the reclassification before train operations begin.

Article III. Action to be Undertaken by Columbus and Greenville Railway

A. Train Operation Over and In Approach to Bridges.

1. *Protection of bridges from overload:* (Applies to Categories A and B) CAGY shall, within fourteen(14) days of this agreement, submit proposed procedures to FRA to ensure that no railroad equipment heavier than that permitted now by CAGY's current maximum weight for its system, or heavier than permitted by the rating for a particular bridge (developed in accordance with Section B, below), is operated over its bridges. Such procedures shall include, but not be limited to, review of waybill weights of all loaded cars accepted from shippers or in interchange from connecting railroads, and weighing of all loaded cars passing a scale location on CAGY.

A loaded car need only be weighed once per shipment. However, a loaded car received in interchange that bears an actual scale weight on its waybill need not be re-weighed by CAGY.

2. *Placement of speed restrictions:* (Applies to Category A) As part of its procedures, CAGY shall ensure that limits of temporary and permanent train speed restrictions are placed so that no train will be required to reduce speed while any part of the train is moving over a bridge. The milepost locations of such limits may differ for eastward versus westward trains.
3. *FRA approval:* Within seven (7) days of receiving the proposed procedures, FRA will approve them or require specific amendments. CAGY will implement the approved procedures, amended as necessary, within fourteen(14) days of FRA's response to the submission of the proposed procedures.

B. Bridge Evaluation and Rating by a Competent Engineer. (Applies to Category A)

1. *Qualifications and engagement of engineer(s):* CAGY shall engage the services of one or more professional engineers who by training and experience are competent in the field of timber railroad bridge design and evaluation, and who are legally competent to practice engineering in the State of Mississippi. CAGY will notify FRA by April 30, 2001 of the identity of any engineer proposed to be so engaged, a statement of the qualifications, ability and availability of that engineer to perform the required work.
2. *Supervision of inspections by engineer:* CAGY and an engineer as described in Paragraph 1 above shall conduct an inspection, evaluation and load rating on all of its bridges, of timber and any other construction, over which trains are operated. The engineer shall develop a procedure for the conduct of the bridge inspection. CAGY shall submit the procedure to FRA for review and comment by May 31, 2001. CAGY may begin inspections under the procedure as soon as the procedure is submitted to FRA. FRA will return initial comments within seven (7) days of the submission and will continue to forward comments to CAGY as needed.
3. *Bridge inspection procedures:* The inspection procedure shall be such as will determine and record the condition and dimensions of every member of each bridge to be rated, together with the relationship between bridge components and the condition of the bridge as an entire structure. Particular attention shall be paid to the presence or absence, and effectiveness, of bracing in timber trestles. The engineer shall supervise the 2001 annual bridge inspection to ensure its accuracy and adequacy as the basis for a rating of each bridge. The inspection of all bridges on CAGY shall be completed August 31, 2001.
4. *Rating of bridges by the engineer:* As the 2001 bridge inspections are completed and recorded, the engineer shall evaluate each bridge and prescribe the limits of a loading regimen for each bridge. Allowable loadings may be prescribed for a definite time period, conditioned upon specified repairs or modifications to the subject bridge. be expressed in terms of the standard Cooper loading as prescribed by in its Manual for Railway Engineering in the appropriate chapter on Timber, Steel or Concrete Bridges. Ratings shall also be expressed in terms of cars and locomotives commonly operated by CAGY, and may include speed restrictions consistent with Article II, Section A2 for particular loading conditions.
5. *Reporting to FRA:* CAGY will submit to FRA a progress report monthly, beginning , to be received by FRA not later than seven (7) calendar days after the last day of the reporting period. The report shall identify by bridge number each bridge on which a rating inspection has been completed, the length of and number of spans in the bridge, and the date of completion of the inspection. The progress report shall also identify in like manner the bridges on which

ratings have been completed. The reporting of completion of inspections and ratings shall be cumulative. CAGY shall also forward the evaluation and rating for each bridge to FRA within 30 days after the rating is completed, and not later than September 28, 2001. The rating for each bridge shall bear the embossed seal of the engineer under whose responsible charge the rating was performed and shall include the inspection report and the calculations upon which the rating is based.

6. *Application of ratings:* CAGY will revise the procedures to protect bridges from overload prescribed in Section A.1. to incorporate the restrictions of each bridge rating as the ratings are completed and forwarded by the Engineer.

C. Bridge Design and Modification by a Competent Engineer. (Applies to all categories)

1. *Supervision by engineer:* CAGY will not attempt to construct, reconstruct, or modify existing members of, a bridge unless such construction, reconstruction or modification has been designed by a competent engineer qualified in accordance with Article II, Section B1 above. The design documents shall bear the embossed seal of the engineer, and the engineer shall supervise and inspect the work to ensure that it conforms to the design.
2. *Permitted repairs and modifications:* This provision shall not preclude the immediate replacement in kind or addition of members to timber trestles where such replacement or addition does not adversely affect the carrying capacity of existing members or the entire bridge, without the work having been designed by an engineer, provided that the work shall be inspected and approved by the engineer within thirty (30) days of its completion.

D. Long-term Provisions for Safe Operation of Trains on Bridges. (Applies to all categories)

1. *Application of FRA Bridge Safety Policy:* CAGY shall prepare and implement a program in conformance with the provisions of the Federal Railroad Administration Policy on the Safety of Railroad Bridges found at, 49 C.F.R. Part 213, Appendix C.
2. *Time period:* CAGY will notify FRA of its compliance with this provision before the termination of this compliance agreement.

Article IV. Certain Actions FRA May Take to Ensure Compliance

A. Unacceptable Conditions. (Applies to all categories)

1. *Determinations by FRA:* If, during the duration of this Agreement, FRA identifies a bridge condition that it determines, in its sole judgement, to be an imminent hazard to continued train operations, FRA will immediately notify CAGY of the condition, and CAGY will immediately remove the bridge from service. Failure by CAGY to remove the bridge from service will be considered a violation of this Agreement.
2. *Authorized FRA personnel:* FRA will notify CAGY of the identity of individual FRA employees who are authorized to make initial determination regarding the suitability of a bridge for continued service.
3. *Authorized CAGY personnel:* CAGY will notify FRA of the identity of its officers designated to receive and act upon a notice by FRA of unsuitable bridge conditions.

4. *Returning bridge to service:* In any case in which FRA identifies such a bridge condition and CAGY effects repairs or modifications to the bridge, the bridge may be returned to service, unless FRA disapproves of the repairs or modifications. A report of an evaluation of these repairs shall be prepared and sealed by the engineer and forwarded to FRA for review. Within seven (7) days of receiving the engineer's report, FRA will notify CAGY if it disapproves the repairs made. If FRA disapproves the repairs, the bridge will remain out of service or, if the bridge had been returned to service immediately following the modifications, it will be removed from service once again.

Article V. Violation of this Agreement. (Applies to all categories)

FRA is entering into this Agreement to address a systemic problem with safe operation of trains on bridges owned by CAGY which could lead to an emergency situation involving a hazard of death or injury. If, in the sole judgment of FRA, CAGY fails to comply in full with any term of this Agreement, FRA may, upon 48 hours notice to CAGY, issue an emergency order containing the terms of the Agreement and specifying penalties for violation of those terms.

Article VI. Mutual Representations

A CAGY makes the following representations:

1. It has read and is familiar with all its obligations under this Agreement and agrees to comply in full with those obligations;
2. It admits that FRA has jurisdiction over it and authority to issue an emergency order in accordance with Article V of this Agreement; and expressly consents to the issuance of such emergency order;
3. It agrees not to seek administrative or judicial review of any emergency order that is issued by FRA pursuant to Article V in response to the railroad's violation of this Agreement and that imposes on CAGY only obligations prescribed in Article III, IV, and V of this Agreement. Nevertheless, it reserves the right to contest factual allegations related to violations of any such emergency order once issued, or the imposition of any civil penalty or other form of relief.

B. FRA makes the following representation:

1. Contingent on CAGY's satisfaction of the terms of this Agreement, FRA agrees not to issue an emergency order concerning the matters addressed in this Agreement.
2. FRA will act in good faith and not in an arbitrary and capricious manner in the enforcement of this Agreement.

Article VII. Notice to Affected Employees and FRA Personnel

Within five (5) business days of the execution of this Agreement, CAGY shall distribute a copy of this Agreement to each employee who is responsible for implementation of, or who is required to observe the terms of, this Agreement, including each current Engineering Department manager and employee, and each Engineering Department manager and employee hired after the effective date of the Agreement. Within five (5) business days of the effective date of this Agreement, FRA shall distribute a copy of this Agreement to

each current inspector in all regions where CAGY operates and to each Inspector hired during the term of this Agreement.

Article VIII. Effective Date and Duration of Agreement

This Agreement shall become effective upon execution and, except as provided below, remains in effect until December 31, 2002 or until CAGY has complied with the provisions of Article III, Section D (Long-term Provisions for Safe Operation of Trains on Bridges), whichever is later. FRA will assess CAGY's progress in implementing this Agreement in January 2002, and will meet with CAGY to discuss that assessment. Based on that assessment, FRA will decide by March 31, 2002, whether to terminate this Agreement and will report its determination to CAGY on or about that date. FRA's determination of whether or not to terminate the Agreement will be a matter of its sole discretion, and CAGY will not challenge that determination. In the event that FRA at any time during the term of this Agreement makes the determination that CAGY has violated this Agreement and issues an emergency order, those sections of this Agreement addressing CAGY's waiver of its right to contest the issuance of an emergency order shall remain in effect; all other provisions of this Agreement shall be rendered null and void.

President
Columbus and Greenville Railway Company

Date

Acting Deputy Administrator
Federal Railroad Administration

Date

Statement of Agency Policy on the Safety of Railroad Bridges

Following is the Federal Register Notice with the current Policy Statement.

Policy on the Safety of Railroad Bridges
From the Federal Register of August 30, 2000
Pages 52667 - 52672
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DEPARTMENT OF TRANSPORTATION
Federal Railroad Administration
49 CFR Part 213
[Docket No. RST-94-3, Notice No. 2]
Policy on the Safety of Railroad Bridges

AGENCY: Federal Railroad Administration (FRA), Department of Transportation, (DOT).

ACTION: Final Statement of Agency Policy.

SUMMARY: FRA issues a final statement of policy for the safety of railroad bridges. FRA establishes suggested criteria for railroads to use to ensure the structural integrity of bridges that carry railroad tracks. This final statement of policy reflects minor changes following public comment on the interim statement of policy published April 27, 1995, at 60 FR 20654.

DATES: *Effective Date:* The final statement of policy is effective September 29, 2000.

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SUPPLEMENTARY INFORMATION: On April 27, 1995, FRA issued an interim statement of policy on the safety of railroad bridges. Published in the **Federal Register** at 60 FR 20654, the interim statement included a request for comments to be submitted to FRA during a 60-day period following publication. The interim statement detailed the reasons which prompted FRA to adopt this policy, as well as the background information behind its adoption. The notice stated that FRA intended to incorporate the policy statement as an appendix to 49 CFR part 213, reflecting any changes warranted by comments submitted during the comment period. FRA's original intent was to publish the final statement of policy at the same time it issued a final rule to revise the Federal Track Safety Standards found at 49 CFR Part 213. However, because the final statement of policy addresses certain unique issues not shared by the final rule to revise the track standards, FRA decided to publish this final statement of policy separately.

Statutory Authority

The Secretary of Transportation has authority to "prescribe regulations and issue orders for every area of railroad safety." 49 U.S.C. 20101. The Secretary has delegated his authority to FRA. 49 CFR 1.49(m).

Reasons for Adoption of the Bridge Safety Policy

The severity of a train accident is usually compounded when a bridge is involved, regardless of the cause of the accident. FRA must be able to deal effectively with any safety problems involving the structural integrity of railroad bridges. At the same time, FRA must assure that private and public resources are not diverted

unnecessarily from railroad inspection and maintenance programs that are also critical to railroad safety. At one extreme, FRA could respond to bridge safety issues only when accidents occur or when someone contacts the agency about particular concerns.

However, such a reactive policy would inhibit FRA's ability to detect impending problems with railroad bridges. At the other extreme, FRA could regulate all aspects of railroad bridge management, including inspection, rating, construction and maintenance. The expense of such an action to the railroad industry and to the Federal government is not justified.

To promote bridge safety, this policy statement includes non-regulatory guidelines to inform railroad managers and all concerned about current good practices related to bridge inspection and management. The guidelines accommodate a wide variety of effective bridge inspection and management methods. Therefore, FRA does not expect that its policy will force railroads to change effective bridge management programs and thus unnecessarily divert resources needed for the functional work of bridge management. Because FRA believes that a national bridge safety policy is most effective when it is administered consistently throughout the United States, the agency will, upon request, cooperate with states to the fullest extent feasible to resolve railroad bridge safety problems. This cooperation will extend to training of inspectors of state railroad safety agencies, joint investigations and evaluations of bridge conditions, and where necessary, invocation of FRA's enforcement authority.

FRA will revise the guidelines as necessary to accomplish the objectives of the bridge safety program. To that end, FRA will continue to monitor and evaluate the railroads' bridge inspection and management programs to guarantee that those responsible for the safety of bridges continue to meet their obligations. FRA will make its findings available to the public upon request, excluding any proprietary information received and identified as such. Should FRA find through its monitoring that widespread bridge structural problems have developed, it may use the information it has gathered to commence a rulemaking proceeding to further address railroad bridge safety.

Effect of this Statement of Policy

This statement of policy containing guidelines for the proper maintenance of bridge structures is meant to be advisory in nature; it does not have the force of regulations under which FRA ordinarily issues violations and assesses civil penalties. Even without specific bridge safety regulations, FRA maintains authority to perform safety inspections of any railroad facility and to issue emergency orders under 49 U.S.C. 20104, 49 U.S.C. 20107, and 49 CFR part 209. This authority permits FRA, if necessary, to remove from service or otherwise impose conditions on any railroad operation which, in the judgment of the agency, poses an emergency situation involving a hazard of death or personal injury.

For example, on February 12, 1996, FRA issued Emergency Order No.19, which removed from service a railroad bridge on the Tonawanda Island Railroad near North Tonawanda, New York, after FRA found that the bridge posed an unacceptable risk to the safety of train operations. Likewise, FRA issued Emergency Order No. 22 on December 16, 1999, which removed from service a railroad bridge on the Oregon Pacific Railroad in Milwaukie, Oregon. The bridge in Oregon was satisfactorily repaired, and FRA lifted Emergency Order No. 22 on January 20, 2000.

This final statement of agency policy does not change FRA's statutory emergency order authority with respect to railroad bridge safety. Rather, the guidelines contained herein represent the general criteria against which FRA will evaluate each railroad's bridge inspection and management program.

Public Response to the Interim Policy

A 60-day comment period followed the publication of the Interim Statement of Policy, and FRA received comments from five parties. Those comments were considered in the development of this final policy and are addressed here.

The American Railway Engineering and Maintenance of Way Association (AREMA), in conveying its support of the policy and its associated guidelines, expressed a concern that the policy's reference to AREMA's *Manual for Railway Engineering* in Guideline 5 may lead some to believe that the specifications contained therein represent minimum safety standards. That interpretation was not intended by FRA, and Guideline 5 has been modified to reflect that concern.

The Association of American Railroads (AAR) and the Norfolk Southern Corporation expressed support for the policy, as well as support for AREMA's comments. The AAR also requested clarification of the provisions in Guideline 1 regarding the responsibility for the safety of bridges.

The Federal Track Safety Standards prescribe the track owner as the party responsible for proper maintenance of the tracks. It follows, therefore, that compliance with the track standards necessitates that the track owner also maintain any structure supporting the track, be it a bridge or an earth structure. Where a bridge owner is not the track owner, the bridge owner is responsible to the track owner for the integrity of the bridge. Likewise, the track owner is responsible to other railroads operating over its track for the integrity of both the track and the bridges which support it.

FRA does not consider it necessary that one railroad operating with trackage rights over another should duplicate the bridge management work of the track owner. An operator under trackage rights should be able to accept a general assurance that the owner is maintaining the integrity of its bridges. However, effective communication of load restrictions between the owner and other operating railroads is essential to prevent overloading bridges.

The Brotherhood of Maintenance of Way Employees (BMWE) had earlier petitioned FRA to issue regulations governing bridge safety, including a requirement for displacement and damage detectors. The BMWE cited the specifications of the American Association of State Highway and Transportation Officials (AASHTO) as examples of standards that govern the design, construction, inspection and maintenance of highway bridges. The BMWE recommended that the same type of standards should be applied to railroad bridges. AASHTO specifications generally have been adopted by highway bridge owners, as the bridge chapters in the AREMA *Manual for Railway Engineering* have been adopted by railroad bridge owners. In fact, railroads frequently use AASHTO specifications for highway bridges which they own, and highway agencies use the AREMA manual in their projects involving railroad bridges. AASHTO specifications are not regulations, unless they have been adopted as such by a government agency that actually owns and maintains highway bridges. FRA believes that this policy statement, with its reference to the AREMA manual, effectively points interested parties toward standards that are the railroad equivalent of the AASHTO specifications and, in so doing, accomplishes the objective of BMWE's recommendation.

The BMWE also commented that it agreed with FRA's plan to make this policy a part of the Federal Track Safety Standards contained in 49 CFR part 213.

Comments From NYSDOT

The Department of Transportation of the State of New York (NYSDOT) submitted several comments generally calling for more stringent regulations than the guidelines in the present policy. NYSDOT questioned the reliability of the results of the 1992–1993 FRA bridge survey because the FRA track inspectors who conducted the survey are not licensed structural engineers. FRA personnel did not themselves inspect or evaluate the bridges included in the survey. Rather, they observed the railroads' inspectors and engineers conducting the inspections and making the evaluations. They reported their findings in the manner which FRA trained them to use for this project, and an FRA professional bridge engineer, who is licensed and registered in the State of New York, analyzed the data. The FRA track inspectors did not engage in formulating any engineering decisions.

In response to FRA's statement that its bridge survey showed that there have been no fatalities caused by the structural failure of a railroad bridge, NYSDOT stated that it had information concerning a fatality that occurred when a railroad bridge failed in 1976. In a review of the accident records for 1976, FRA found one instance in which a locomotive engineer in Iowa was fatally injured when a railroad trestle was washed out in a flood. The accident was reported to FRA as having been caused by a flood or washout, and not a bridge failure. Upon review of the record, FRA finds that the accident was caused by damage to the bridge by outside sources and not by the structural failure of the bridge.

NYSDOT also responded to FRA's report that 11 of 19 train accidents on bridges occurring since 1983 were caused by external damage to the bridges from wash-outs or from collisions of marine vessels. According to NYSDOT, these accidents should be counted as accidents caused by bridge failure. FRA disagrees. FRA believes that it could perform a more precise analysis of the data by distinguishing between accidents caused by external damage to bridges and accidents resulting from failure of bridges to withstand normal service loads. The Federal Track Safety Standards already address floods and wash-outs by requiring railroads to properly maintain drainage facilities under and adjacent to roadbeds, including bridges. See 49 CFR 213.33.

The Track Safety Standards also require in 49 CFR 213.239 that railroads perform special inspections following floods, fire, severe storms, or other occurrences that might have damaged track structure. FRA considers any damage to the track or its supporting structures, including bridges, that renders the track incapable of safely carrying its traffic loads, to come under the provisions of this section of the Track Safety Standards.

NYSDOT commented that railroad bridges, many of which were designed to carry heavy steam locomotives, are now severely loaded by modern 100-ton capacity cars. FRA has found that the railroads understand the phenomenon of structural fatigue and its effect on the longevity of steel structures. Railroads have the advantage of controlling the loads they operate over their bridges, and in most cases, they can determine the loading history of a bridge with sufficient accuracy to permit a valid fatigue evaluation.

NYSDOT commented that FRA does not maintain quantitative data on the nation's railroad bridges, unlike highway agencies which keep detailed quantitative data on highway bridges. Highway agencies need to gather detailed information on those bridges because they are fully responsible for their construction, inspection, maintenance, repair, and safety. However, in the railroad industry, the railroads are responsible for the bridges they own or operate, and they maintain the information necessary for the fulfillment of that responsibility. FRA owns no bridges, and generally does not fund bridge maintenance or construction. The agency therefore does not have the need to expend resources to collect and maintain detailed quantitative data that would duplicate information held by the railroads themselves.

NYSDOT commented that FRA should issue regulations mandating certain requirements for bridge inspection programs. These requirements would include specifications for

- (1) Diving inspections at set periods,
- (2) levels of inspection for various types of bridges and bridge components,
- (3) qualifications and training of inspection personnel, and
- (4) historical information to be provided to bridge inspectors.

FRA does not believe that such regulations are warranted. Rather, these points of concern should be addressed in the guidelines, with the manner of execution left to the determination of the engineer engaged by the bridge owner. FRA believes that specific inspection criteria are best determined on a bridge-by-bridge basis. FRA further believes that it can adequately address individual bridge problems as they arise by exercising its existing safety authority.

An example is FRA Emergency Order No. 19 against the Tonawanda Island Railroad bridge in which NYSDOT assisted FRA in collecting information to address specific problems on one particular railroad

bridge that was in very poor condition and under highly unusual circumstances. Another example is FRA Emergency Order No. 22 against the Oregon Pacific Railroad. Before issuing that emergency order, FRA, with the help of the Oregon Department of Transportation, gathered information about serious defects in the bridge structure and well as the inadequate repairs the railroad had already made to the bridge.

Differences Between Interim and Final Policies

In addition to the editorial modifications described under the section “Public Participation,” as well as other slight editorial modifications, FRA has added three references to earthquakes and seismic activity to reflect recent advances in railroad bridge engineering related to seismic design. This addition is intended to call attention to potential risks to railroad bridges posed by seismic activity in the United States. FRA also has clarified in paragraph (b) of Section 1, “Responsibility for safety of railroad bridges,” who is responsible for railroad bridge safety when the owner of the track on a bridge is not the owner of the bridge itself.

Regulatory Impact

Executive Order 12866 and DOT Regulatory Policies

This statement of policy has been evaluated in accordance with existing regulatory policies. It is considered to be a nonsignificant regulatory action under E.O. 12866 and is a nonsignificant rule under 5(a)(4) of DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979) because it is advisory only and does not carry with it the force of law or regulation. For nonsignificant rules, the DOT Regulatory Policies and Procedures ordinarily require an economic evaluation to be placed in the public docket. This evaluation should include an analysis of the economic consequences of the rule, including (if possible) an estimation of the cost and benefits of the rule to the private sector, consumers, and all levels of government. However, such an evaluation is not required if the expected impact of a rule is deemed minimal. Because this statement of policy offers only guidelines to be followed and does not mandate any actions or establish any record keeping requirements, the need for further cost/ benefit analysis is not indicated.

Regulatory Flexibility Act

Because this statement of policy is advisory in nature and does not carry with it the force of law or regulation, analysis of it under the Regulatory Flexibility Act (5 U.S.C. 601, *et seq.*) is not required. Nevertheless, in reviewing the economic impact of this statement of policy, FRA concluded that it will not have any measurable impact on small entities. There are no direct or indirect economic impacts for small units of government, businesses, or other organizations. Therefore, it is certified that this policy statement will not have a significant economic impact on a substantial number of small entities under the provisions of the Regulatory Flexibility Act.

Small Business Regulatory Enforcement Fairness Act of 1996

Because an analysis under the Regulatory Flexibility Act is not required for the final statement of policy, FRA is likewise not required to issue a Small Entity Compliance Guide to summarize the requirements of this rule, pursuant to section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121). *Paperwork Reduction Act* There are no information collection requirements contained in this statement of policy. *Environmental Impact* FRA has evaluated this statement of policy in accordance with its procedures for ensuring full consideration of the potential environmental impacts of FRA actions, as required by the National Environmental Policy Act (42 U.S.C. 4321 *et seq.*) and related directives. This notice meets the criteria that establish this as a non-major action for environmental purposes.

Federalism Implications

FRA undertook the survey of railroad bridges because of a perception that the nation's railroad bridges are aging and may pose a significant hazard to public safety. Following the survey, FRA concluded that the vast majority of such bridges across the nation are adequately maintained and do not present a threat to safety. This conclusion is not based upon an assessment of railroad bridge safety for any particular location, nor does it imply that every railroad bridge in every state meets the minimum guidelines. Therefore, it is FRA's intent that this statement of policy should not preclude any state from addressing safety issues concerning railroad bridges within that state.

In stating its intent that this policy statement should not preempt regulatory actions by states, FRA is adhering to the principles of Executive Order 13132 issued on August 4, 1999, which directs Federal agencies to exercise great care in establishing policies that have federalism implications. See 64 FR 43,255. Section 3(a) of the Executive Order requires Federal agencies to “closely examine the constitutional and statutory authority supporting any action that would limit the policymaking discretion of States and ***carefully assess the necessity for such action.” In Section 3(b), the Executive Order continues, “National action limiting the policymaking discretion of the States shall be taken only where there is constitutional and statutory authority for the action and the national activity is appropriate in light of the presence of a problem of national significance.” Of course, FRA has the constitutional and statutory authority to issue guidelines addressing railroad bridge safety, but the agency has not found a “problem of national significance” of such a dimension to warrant limiting state policymaking discretion in addressing the same subject matter. In light of this conclusion, a Federalism Assessment pursuant to Executive Order 13132 is not required. Nevertheless, FRA has prepared a short Federalism analysis which resides in the docket reserved for this proceeding.

For railroad operations to be conducted safely, the structural integrity of bridges that carry railroad track must be properly maintained. FRA’s research reveals that the railroad industry does not have a systemic bridge safety problem. For that reason, FRA adopts a safety policy, rather than regulations, to effect and maintain railroad bridge safety.

List of Subjects in 49 CFR Part 213

Penalties, Railroad Safety, Railroads

Amend Part 213 to read as follows:

PART 213—TRACK SAFETY STANDARDS

1. The authority citation for part 213 is revised to read as follows:

Authority: 49 U.S.C. 20102–20114 and 20142; 28 U.S.C. 2461; and 49 CFR 1.49(m).

2. A new Appendix C is added to part 213 to read as follows:

Appendix C to Part 213—Statement of Agency Policy on the Safety of Railroad Bridges

1. The structural integrity of bridges that carry railroad tracks is important to the safety of railroad employees and to the public. The responsibility for the safety of railroad bridges rests with the owner of the track carried by the bridge, together with any other party to whom that responsibility has been assigned by the track owner.
2. The capacity of a bridge to safely support its traffic can be determined only by intelligent application of engineering principles and the laws of physics. Bridge owners should use, as FRA does, those principles to assess the integrity of railroad bridges.
3. The long term ability of a structure to perform its function is an economic issue beyond the intent of this policy. In assessing a bridge’s structural condition, FRA focuses on the present safety of the structure, rather than its appearance or long term usefulness.
4. FRA inspectors conduct regular evaluations of railroad bridge inspection and management practices. The objective of these evaluations is to document the practices of the evaluated railroad and to disclose any program weaknesses that could affect the safety of the public or railroad employees. When the evaluation discloses problems, FRA seeks a cooperative resolution. If safety is jeopardized by a bridge owner’s failure to resolve a bridge problem, FRA will use available legal means, including issuance of emergency orders, to protect the safety of railroad employees and the public.
5. This policy statement addresses the integrity of bridges that carry railroad tracks. It does not address the integrity of other types of structures on railroad property (i.e., tunnels or bridges carrying highways) or other features over railroads (i.e., highway overpasses).
6. The guidelines published in this statement are advisory, rather than regulatory, in nature. They indicate those elements FRA deems essential to successful bridge management programs. FRA uses the guidelines when evaluating bridge inspection and management practices.

Guidelines

1. Responsibility for safety of railroad bridges

(a) **Track owner.** The owner of the track on a bridge, or another person assuming responsibility for the compliance of that track with this Part under provisions of § 213.5, is responsible for ensuring that the bridge is capable of safely carrying all railroad traffic operated on that track, and for specifying the maximum loads that may be operated over the bridge.

(b) **Divided ownership.** Where the owner of the track on a bridge does not own the bridge, the track owner should ensure that the bridge owner is following a program that will maintain the integrity of the bridge. The track owner either should participate in the inspection of the bridge, or should obtain and review reports of inspections performed by the bridge owner. The track owner should maintain current information regarding loads that may be operated over the bridge, either from its own engineering evaluations or as provided by a competent engineer representing the bridge owner. Information on permissible loads may be communicated by the bridge owner either in terms of specific car and locomotive configurations and weights, or as values representing a standard railroad bridge rating reference system. The most common standard bridge rating reference system incorporated in the Manual for Railway Engineering of the American Railway Engineering and Maintenance of Way Association is the dimensional and proportional load configuration devised by Theodore Cooper. Other reference systems may be used where convenient, provided their effects can be defined in terms of shear, bending and pier reactions as necessary for a comprehensive evaluation and statement of the capacity of a bridge.

(c) **Other railroads.** The owner of the track on a bridge should advise other railroads operating on that track of the maximum loads permitted on the bridge stated in terms of car and locomotive configurations and weights. No railroad should operate a load which exceeds those limits without specific authority from, and in accordance with restrictions placed by, the track owner.

2. Capacity of Railroad Bridges

(a) **Determination.** The safe capacity of bridges should be determined by competent engineers using accepted principles of structural design and analysis.

(b) **Analysis.** Proper analysis of a bridge means knowledge of the actual dimensions, materials and properties of the structural members of the bridge, their condition, and the stresses imposed in those members by the service loads.

(c) **Rating.** The factors which were used for the design of a bridge can generally be used to determine and rate the load capacity of a bridge provided: (i) The condition of the bridge has not changed significantly, and (ii) The stresses resulting from the service loads can be correlated to the stresses for which the bridge was designed or rated.

3. Railroad Bridge Loads

(a) **Control of loads.** The operating instructions for each railroad operating over bridges should include provisions to restrict the movement of cars and locomotives whose weight or configuration exceed the nominal capacity of the bridges.

(b) **Authority for exceptions.** Equipment exceeding the nominal weight restriction on a bridge should be operated only under conditions determined by a competent engineer who has properly analyzed the stresses resulting from the proposed loads.

(c) **Operating conditions.** Operating conditions for exceptional loads may include speed restrictions, restriction of traffic from adjacent multiple tracks, and weight limitations on adjacent cars in the same train.

4. Railroad Bridge Records

(a) The organization responsible for the safety of a bridge should keep design, construction, maintenance and repair records readily accessible to permit the determination of safe loads. Having design or rating drawings and calculations that conform to the actual structure greatly simplifies the process of making accurate determinations of safe bridge loads. (b) Organizations acquiring railroad property should obtain

original or usable copies of all bridge records and drawings, and protect or maintain knowledge of the location of the original records.

5. Specifications for Design and Rating of Railroad Bridges

- (a) The recommended specifications for the design and rating of bridges are those found in the *Manual for Railway Engineering* published by the American Railway Engineering and Maintenance-of-way Association. These specifications incorporate recognized principles of structural design and analysis to provide for the safe and economic utilization of railroad bridges during their expected useful lives. These specifications are continually reviewed and revised by committees of competent engineers. Other specifications for design and rating, however, have been successfully used by some railroads and may continue to be suitable.
- (b) A bridge can be rated for capacity according to current specifications regardless of the specification to which it was originally designed.

6. Periodic Inspections of Railroad Bridges

- (a) Periodic bridge inspections by competent inspectors are necessary to determine whether a structure conforms to its design or rating condition and, if not, the degree of nonconformity.
- (b) The prevailing practice throughout the railroad industry is to inspect railroad bridges at least annually. Inspections at more frequent intervals may be indicated by the nature or condition of a structure or intensive traffic levels.

7. Underwater Inspections of Railroad Bridges

- (a) Inspections of bridges should include measuring and recording the condition of substructure support at locations subject to erosion from moving water.
- (b) Stream beds often are not visible to the inspector. Indirect measurements by sounding, probing, or any other appropriate means are necessary in those cases. A series of records of those readings will provide the best information in the event unexpected changes suddenly occur. Where such indirect measurements do not provide the necessary assurance of foundation integrity, diving inspections should be performed as prescribed by a competent engineer.

8. Seismic Considerations

- (a) Owners of bridges should be aware of the risks posed by earthquakes in the areas in which their bridges are located. Precautions should be taken to protect the safety of trains and the public following an earthquake.
- (b) Contingency plans for seismic events should be prepared in advance, taking into account the potential for seismic activity in an area.
- (c) The predicted attenuation of ground motion varies considerably within the United States. Local ground motion attenuation values and the magnitude of an earthquake both influence the extent of the area affected by an earthquake. Regions with low frequency of seismic events produce less data from which to predict attenuation factors. That uncertainty should be considered when designating the area in which precautions should be taken following the first notice of an earthquake. In fact, earthquakes in such regions might propagate their effects over much wider areas than earthquakes of the same magnitude occurring in regions with frequent seismic activity.

9. Special Inspections of Railroad Bridges

- (a) A special bridge inspection should be performed after an occurrence that might have reduced the capacity of the bridge, such as a flood, an earthquake, a derailment, or an unusual impact.
- (b) When a railroad learns that a bridge might have suffered damage through an unusual occurrence, it should restrict train operations over the bridge until the bridge is inspected and evaluated.

10. Railroad Bridge Inspection Records

- (a) Bridge inspections should be recorded. Records should identify the structure inspected, the date of the inspection, the name of the inspector, the components inspected, and their condition.

- (b) Information from bridge inspection reports should be incorporated into a bridge management program to ensure that exceptions on the reports are corrected or accounted for. A series of inspection reports prepared over time should be maintained so as to provide a valuable record of trends and rates of degradation of bridge components. The reports should be structured to promote comprehensive inspections and effective communication between an inspector and an engineer who performs an analysis of a bridge.
- (c) An inspection report should be comprehensible to a competent person without interpretation by the reporting inspector.

11. Railroad Bridge Inspectors and Engineers

- (a) Bridge inspections should be performed by technicians whose training and experience enable them to detect and record indications of distress on a bridge. Inspectors should provide accurate measurements and other information about the condition of the bridge in enough detail so that an engineer can make a proper evaluation of the safety of the bridge.
- (b) Accurate information about the condition of a bridge should be evaluated by an engineer who is competent to determine the capacity of the bridge. The inspector and the evaluator often are not the same individual. The quality of the bridge evaluation depends on the quality of the communication between them.

12. Scheduling Inspections

- (a) A bridge management program should include a means to ensure that each bridge under the program is inspected at the frequency prescribed for that bridge by a competent engineer.
- (b) Bridge inspections should be scheduled from an accurate bridge inventory list that includes the due date of the next inspection.

13. Special Considerations for Railroad Bridges

Railroad bridges differ from other types of bridges in the types of loads they carry, in their modes of failure and indications of distress, and in their construction details and components. Proper inspection and analysis of railroad bridges require familiarity with the loads, details and indications of distress that are unique to this class of structure. Particular care should be taken that modifications to railroad bridges, including retrofits for protection against the effects of earthquakes, are suitable for the structure to which they are to be applied. Modifications should not adversely affect the serviceability of the bridge nor its accessibility for periodic or special inspection.

Issued in Washington, DC on August 22, 2000.

Jolene M. Molitoris,

Administrator.

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BILLING CODE 4910-06-P

Large Railroad Assignments by Region. 1998 (Subject to change in future years)

Class I	Region	1	2	3	4	5	6	7	8
Conrail			2						
CSXT				3					
Norfolk Southern				3					
Canadian Pacific (SOO)					4				
Canadian National (GTW)					4				
Illinois Central (+ CC)					4				
Burlington Northern & Santa Fe						5			
Kansas City Southern (+GWWR)							5		
Union Pacific							5		
Passenger Railroads									
Metro North (New York)	1								
Long Island Rail Road	1								
New Jersey Transit Rail Operations	1								
Amtrak			2						
SEPTA (Philadelphia)			2						
Tri-Rail (Florida)				3					
METRA (Chicago)					4				
NICTD (Northern Indiana)					4				
SCRDD (Los Angeles)								6	
Large Regional Railroads									
Guilford Transportation Industries	1								
St. Lawrence & Hudson (CP)(D&H)	1								
Buffalo & Pittsburgh			2						
Florida East Coast				3					
Wisconsin Central					4				
RailTex Roads						5			
I&M Rail Link							6		
Iowa Interstate							6		
Montana Rail Link									8
Dakota, Minnesota & Eastern									8

FEDERAL RAILROAD ADMINISTRATION

Office of Safety

Bridge Observation Report Format

RR Code 1.a _____ RR Name 1.b _____

Division 1.c _____ Subdivn 1.d _____

Bridge No. 2.a _____ Section 2.b _____ of 2.c _____ Sections.

FRA/USCG Waterway Bridge key no. 3.a _____ River Mile 3.b _____

Crossing 3.c _____ **O**ver/**U**nder 3.d _ track.
Highway, stream, railroad, etc.

City 4.a _____ State 4.b _____ RR Milepost 4.c _____

Geographic Coordinates: Latitude 4.d _____ North, Longitude 4.e _____ West

Type: Superstructure 5.a _____ Substructure 5.b _____ Deck 5.c _____

Principal materials 5.d _____ Walkway(s) (**R** / **L** Side(s) / **C**enter) 5.e _____

Number of spans 6.a _____ Total length 6.b _____ ft. Longest span 6.c _____ ft.

Dates of 7.a _____ 7.b _____ No. tracks 7.c _____ 7.d _____
Original construction Major modifications Now Originally

Maximum authorized train speed: Freight 8.a _____ mph. Passenger 8.b _____ mph.

Loads permitted by timetable or bulletin 8.c _____

Other load or speed restrictions 8.d _____

Inspected 9.a _____ times per 9.b _____ by Owner / Others: 9.c _____

Date of last previous inspection 9.d _____

Comments, exceptions, notes, sketches (use additional pages as necessary) 10. _____

Attachments 11. _____
List here or enter NONER.R. Copy received by 12.a _____ 12.b _____
Railroad representative - signature and title DateAssociated Inspection Report 12.c _____ 12.d _____ 12.e _____
Inspector's ID Report number Date

FRA Inspector 12.f _____ 12.g _____ 12.h _____

Inspector's Signature

Inspector's ID

Date

Format for Electronic Reporting of Bridge Observations.**FEDERAL RAILROAD ADMINISTRATION**

Office of Safety Assurance & Compliance - Bridge Observation Report Format

Instructions:

This is a WordPerfect keyboard merge file for entry of data on railroad bridge observations. It contains merge codes that will prompt you for an entry into each field in the report. When you enter a value, for a field, it not only shows up on the page you are working, but in a list of fields at the end of the document. The resulting file will have both a filled-out form that can be given to a railroad representative or read by anyone, and an attached list of field names and field values for automated entry into a data base.

To begin data entry, open this file in WordPerfect. You should have a "Merge File" toolbar at the top of the view. Click on Merge and a "Perform Merge" window appears, with the default options, which should be:

____ Form File -> Current document
Data source -> None
Output -> New document

Again click on Merge and the process begins, field by field.

The entry fields follow the names and order of the hard-copy Bridge Observation Report, so if you have completed that form manually, the same values should be entered here, in order. You may enter blank values in most fields, so if there is nothing to enter, press ENTER and move on to the next field.

When each field has been presented for entry the merge process is over and you have a fresh document to save in WordPerfect format. Give the document any name you want, so long as it is different from all others, and save it. You may then edit the document as any WordPerfect document, but be sure that any changes in the first form are reflected in the corresponding fields in the data base entry section. Be CAREFUL not to erase any of the arrows (>) in the data base entry section. They are used to separate field names and field values in the conversion process. DO NOT change the field names, or any of the characters to the left of the > in the data base entry section.

The names of four fields near the end of the report are marked with asterisks *. These fields are:

Inspector's ID*
Associated Inspection Report Number*
Report Year*
Report Line Number*

These key fields will make each bridge observation report unique, and key it to the Inspectors' regular inspection report. Since inspection report numbers begin over each year, we need the year of the report series. In order to permit more than one bridge observation on a regular inspection report, the line number field was added to this format, so the line number should be different for each bridge observation on one track inspection report.

To see the merge codes, click on Options in the merge feature bar, and select Display Codes. Before entering data, use Hide Codes to clear them out of the display.

FEDERAL RAILROAD ADMINISTRATION

Office of Safety - Bridge Observation Report Format

Railroad Information

RR Code	1.a
RR Name	1.b
RR Division	1.c
RR Subdivision	1.d

Bridge Identification

Bridge No.	2.a
Section	2.b
No. of Sections	2.c

FRA/USCG Waterway Bridge Information

Bridge Key No.	3.a
River Mile	3.b

Crossing

Feature	3.c
Over/Under	3.d

Location

City	4.a
State	4.b
RR Milepost	4.c

Geographic Coordinates

Latitude	4.d
Longitude	4.e

Structure Type

Superstructure	5.a
Substructure	5.b
Deck	5.c
Materials	5.d
Walkway(s)	5.e
Moveable Type	5.f

Dimensions of this section of bridge

Number of spans	6.a	
Total length	6.b	ft
Longest span	6.c	ft.

History

Construction date	7.a
Modification date	7.b
No. tracks now	7.c
Orig. no. of tracks	7.d

Operation

Maximum authorized train speed:

Freight 8.a

Passenger 8.b

Loads permitted
by timetable or
bulletin 8.cOther load or speed
restrictions 8.d ____**Inspection program**

Inspected 9.a ____ times

per 9.b

by Owner/Others 9.c

Date of last previous
inspection 9.d

Comments, exceptions, notes, sketches (use additional pages as necessary)

10.

Attachments

11.

R.R. Copy received by	12.a	_____
		Railroad representative - signature and title
	12.b	_____
		Date
Inspector's ID*	12.c	
Associated		
Inspection Report No.*	12.d	
Inspection Date	12.e	
FRA Inspector	12.f	_____
		Inspector's Signature
	12.g	_____
		Inspector's ID
Report date	12.h	
Report year*	12.i	
Report line number*	12.j	

Names of Fields in Data File:

12.c. >INSP_ID>	4.d. >LAT_DEG>	7.d. >TKS_ORIG>
12.i. >YEAR>	>LAT_MIN>	8.c. >MAX_LOADS>
12.d. >REPORT_NR>	>LAT_SEC>	8.a. >MAX_SPD_FRT>
12.j. >LINE_NR>	4.e. >LON_DEG>	8.b. >MAX_SPD_PSGR>
1.a. >RR_CODE>	>LON_MIN>	8.d. >OTHER_RESTRICTIONS>
1.c. >RR_DIVN>	>LON_SEC>	9.a. >INSP_FREQ>
1.d. >RR_SUB_DIVN>	5.a. >TYPE_SUPER>	9.b. >INSP_PERIOD>
2.a. >BRIDGE_NR>	5.b. >TYPE_SUB>	9.c. >INSP_BY>
4.c. >RR_MILE>	5.c. >TYPE_DECK>	9.d. >LAST_INSP>
2.b. >SECT_NR>	5.d. >MATERIAL>	11. >ATTACHMENTS>
2.c. >NR_SECTS>	5.e. >WALKWAYS>	12.e. >INSP_DATE>
3.a. >H2O_KEY>	6.a. >NR_SPANS>	12.h. >REPORT_DATE>
3.b. >RIVER_MILE>	6.b. >TOTAL_LEN>	>ToSend>
5.f. >MOVE_TYPE>	6.c. >LONG_SPAN>	>Forwarded>
3.c. >CROSSING>	7.a. >DATE_ORIG>	10. >COMMENTS>
3.d. >O/U>	7.b. >DATE_MODS>	
4.a. >CITY>	7.c. >TKS_NOW>	
4.b. >STATE>		

End of Chapter 7